

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of

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CC Docket No. 94-102

Amendment of Part 22 of the Commission's  
Rules to Enable a Cellular Telephone User  
Effective and Reliable Access to 911 Service

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**REPLY COMMENTS OF**  
**SOUTHWESTERN BELL MOBILE SYSTEMS, INC.**  
**ON THE FURTHER NOTICE OF PROPOSED RULEMAKING**

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## **Summary**

Southwestern Bell Mobile Systems ("SBMS") supports wireless accessibility to 911 services. However, the Commission's Further Notice of Proposed Rulemaking ("FNPRM") goes too far in proposing requirements which would detract, rather than enhance public safety. As stated in SBMS' comments, the Commission's proposal which will require all 911 calls from non-service initialized wireless handsets to be passed to a Public Safety Answering Point ("PSAP") is fraught with problems and not in the public interest. The Commission's proposal of establishing higher accuracy requirements for location technology is opposed by every wireless trade association, every wireless manufacturer and nearly every wireless carrier commenting in this proceeding. Also, numerous parties oppose the Commission's proposal to require a wireless 911 caller's call be sent to the strongest available signal of any cellular carrier. In fact, the wireless industry's leading carriers, manufacturers, trade associations and public safety agencies oppose this concept. Concerning reporting requirements, SBMS urges that an annual report from the wireless industry would be sufficient to brief the FCC on E911 status. Finally, for the FCC to issue anything besides the most general education guidelines would restrict carriers and public safety agencies from producing materials that truly educate customers on the specific 911 situations occurring in the differing markets across the country.

## **Introduction**

Southwestern Bell Mobile Systems, Inc. ("SBMS") files the following reply comments in response to the Further Notice of Proposed Rulemaking ("FNPRM") in the above docket.<sup>1</sup>

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<sup>1</sup>In the matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket 94-102, RM-8143 Further Notice of Proposed Rulemaking (Released July 26, 1996).

### **Routing of Non-Service Initialized 911 Calls is Opposed by All Factions of the Wireless and Public Safety Industries**

As stated in SBMS' comments, the Commission's proposal to require all 911 calls from non-service initialized wireless handsets be passed to a Public Safety Answering Point ("PSAP") is fraught with problems and not in the public interest.<sup>2</sup> There is wide-spread agreement on this point.<sup>3</sup>

Three overriding issues argue against non-service initialized handsets:

- \* The impossibility of calling back the 911 caller;
- \* the increase of wireless carrier liability; and
- \* the danger involved with fraudulent and prank wireless 911 calls.

### **Non-initialized Handsets Do Not Allow for Call-back**

SBMS' Comments detailed the inherent inability of a non-service initialized handset to identify the 911 caller for possible call-back. That is, in those cases in which the caller may have left insufficient information, or been unable to give sufficient information, to allow the 911 authorities to respond, the Commission's proposal would be counterproductive to public safety.

The Ad-Hoc Alliance ("Ad Hoc") includes in its comments an Attachment E which details an alleged 911 call-back solution. Ad Hoc's "solution," however, is based on "Follow Me Roaming" which is no longer in use on most of SBMS' networks. "Follow Me Roaming" works on the

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<sup>2</sup>SBMS Comments, p. 3.

<sup>3</sup>360 Communications p. 5; Airtouch p. 6; American Portable Telecom p. 2; CTIA p. 7; APCO, NENA and NASNA p. 6; New Jersey OETS p. 2.

principle of a customer using his handset to register with the Mobile Telephone Switching Office (MTSO) when roaming and being assigned a temporary pseudo-Automatic Number Identification (pseudo-ANI). Then when the customer received a call, "Follow Me Roaming" used a sequential paging method for call delivery that required a handset to be paged in one service area, then another and another until the page is answered. This method became impractical with large systems of multiple switches, resulting in call set-up times exceeding a minute in length. Instead, SBMS networks have been converted to Automatic Call Delivery ("ACD"), a system that requires no action by the customer. With ACD, a roamer enters a foreign market and the roamer's handset automatically registers with the foreign market using its Mobile Identification Number ("MIN") and Electronic Serial Number ("ESN"). The foreign system checks with the home system to make sure the MIN and ESN are legitimate and allow the home system to detect the location of the roamer. Then, when that roamer makes a call or receives a call, the foreign system checks with the home system to get a temporary number (pseudo-ANI), for that call only, and completes the call. The same handset on the very next call would most likely be assigned a new Pseudo-ANI. Consequently, there is no "callback" to this number. Additionally, even if ACD did allow for a callback, using AD Hoc's proposal all handsets without legitimate telephone numbers, i.e. those with a MIN of "000-000-0000," would be paged and begin ringing. Then, if a "000-000-0000" handset with a different ESN from the original 911 caller's handset responded first to the page, the switch would attempt to complete the call, realize it was not the ESN it was looking for and cause the call to fail. The switch will not wait for the right ESN as the Ad Hoc "solution" supposes. Therefore, the Ad Hoc proposed solution is unworkable.

And, the substitute local telephone plan ignores the fact that many “non-service initialized phones” may already have a legitimate telephone number programmed into them from previous service. These handsets would not work with the Ad Hoc proposal.

Finally, Ad Hoc states that the costs to its solutions should not exceed \$250,000 for each switch manufacturer and \$50,000 per MTSO system.<sup>4</sup> Ad Hoc provides no support for these numbers; even if these figures are accurate, they represent a very significant expense to carriers. The Commission cannot consider these numbers without input from the manufacturers. SBMS questions how much expense wireless subscribers should be forced to bear in order to allow non-subscribers to ride free.

The Ad Hoc “solution” is no solution at all.

#### The Commission’s Proposal Would Increase Wireless Carriers’ Liability

SBMS previously raised, and the Commission has previously discussed, the issue of wireless carrier’s liability in the context of 911.<sup>5</sup> The Commission has stated that carriers can protect themselves by including provisions in contracts with their customers. However, if the Commission mandates that wireless carriers must transmit calls from non-service initialized phones, carriers have no such protection. The non-service initialized customer has no contract with a carrier. Therefore, there is no contractual limitation of liability. Simply stated, there can be no contractual protection

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<sup>4</sup>Ad Hoc, Attachment E.

<sup>5</sup>Report and Order and FNPRM p. 52-53.

where there is no contract. Therefore, the Commission's suggestion fails. SBMS reiterates its concern about excessive carrier liability for these calls.

#### **Harmful Prank Calls Will Increase**

Concerning the danger of prank 911 calls, New Jersey OETS states, "fraudulent and prank calls, which were all but eliminated with wireline enhanced 9-1-1, have resurfaced. A Police Officer was killed in North Jersey responding to such a call."<sup>6</sup> Prank 911 calls can be life-threatening and must be prevented. Allowing non-service initialized phones to access 911 will continue fraudulent 911 calls and place additional public safety individuals in dangerous situations.

Therefore, the same three issues raised by SBMS, and by a plethora of other parties, in opposition to the non-service initialized handsets still prevail. The Commission's proposal to require all 911 calls from these handsets be passed to a PSAP should be rejected.

#### **The Commission's Additional Location Requirements Cannot be Adopted**

The Commission's proposal of establishing higher accuracy requirements for location technology is opposed by every wireless trade association, every wireless manufacturer and nearly every wireless carrier commenting in this proceeding.<sup>7</sup> These twenty-two commenting parties state that the proposed requirements are either premature, unrealistic or technically impossible. In fact,

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<sup>6</sup>New Jersey OETS p. 2.

<sup>7</sup>ACTA p. 4; CTIA p. 2; PCIA p. 2; Rural Telecommunications Group p. 2; TA p. 5; E.F. Johnson p. 3; Ericsson p. 2; Harris Corporation p. 3; KSI and MULOC p. 5; Lucent p. 3; Nokia p. 2; Ameritech p. 9; Airtouch p. 3; American Portable Telecom p. 2; Associated RT p. 19-29; AT&T p. 2; BANM p. 3; GTE p. 3; Nextel p. 3; Omnipoint p. 1; SBMS p. 5.

in the comments of KSI & MULOC, which the Commission references in the FNPRM,<sup>8</sup> they state that “KSI did not and does not aver that implementing its system, or any other system, can economically provide locational accuracy to within a radius of 40 feet, 90 percent of the time, in all environments.”<sup>9</sup> As stated before by SBMS and by many other commenting parties, the Commission’s initial Phase I and II location requirements from the Report and Order are extremely aggressive and should only be goals, rather than mandates.

Adding further requirements distracts from the Phase I and II requirements, is untimely, and should be postponed until the original requirements are much closer to being met.

#### **911 Access to Multiple Wireless Providers and the Strongest Signal is Unrealistic**

Numerous parties oppose the Commission’s proposal to require a wireless 911 caller’s call be sent to the strongest available signal of any cellular carrier.<sup>10</sup> As Bell Atlantic NYNEX Mobile (“BANM”) states, this subject has already been discussed and debated with no support for the idea except from the originator, Ad Hoc.<sup>11</sup> In fact, the wireless industry’s leading carriers, manufacturers, trade associations and public safety agencies oppose this concept.

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<sup>8</sup>FNPRM p. 69.

<sup>9</sup>KSI and MULOC p. 5.

<sup>10</sup>Ameritech p. 7; Associated RT p. 8; AT&T Wireless p. 4; BANM p. 5; GTE p. 7; Omnipoint p. 4; SBMS p. 7; E.F. Johnson p. 6; Nokia p. 5; AMTA p. 6; PCIA p. 11; Rural Telecom Group p. 7; TIA p. 12; APCO, NENA and NASNA p. 6.

<sup>11</sup>BANM p. 5.

Ad Hoc begins its comments with “incorporating this feature [connecting to the strongest compatible signal] requires only a simple, inexpensive software change.”<sup>12</sup> Not so. In today’s environment, many handsets can scan both “A” and “B” bands. However, they only switch to the non-preferred system when the preferred system falls below a signal strength level preset by that specific handset manufacturer. This is not accomplished through an existing algorithm which constantly compares signal strength.

Ad Hoc continues by claiming that “the use of the strongest signal enhances the ability of the PSAP to locate the calling party because that party will be within a smaller radius from the receiver location.”<sup>13</sup> This claim is wrong. Apparently, Ad Hoc does not have practical knowledge of real-world wireless system design. Cellular base station transmit power can vary from 50 dBm (100 Watts) to 30 dBm (1 watt) and lower for microcells. Therefore, the assumption that the strongest signal will identify the closest cell is not always true. Due to terrain and buildings, a strong signal at a particular location may be farther from that cell than a weaker signal. Moreover, the strongest signal is not always the best server. Digital technologies have no dedicated control channel, and this proposal would require a mobile station to scan all the channels, requiring more than a reasonable amount of time to connect a call.

Ad Hoc then suggests that “all wireless phones be equipped to operate over a separate, unlicensed, cordless phone 900 MHZ spectrum, dedicated for 911 calls, and that all covered carrier

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<sup>12</sup>Ad Hoc Alliance p. 2.

<sup>13</sup>*Ibid.* p. 4.



be required to handle such calls.”<sup>14</sup> This suggestion is absurd and contradicts AndHoc’s own attachment E, which states “[i]t is even more impractical from the Commission’s standpoint to reassign spectrum in each frequency band from one wireless service provider to several competing wireless service providers to support such activities.”<sup>15</sup>

Support for the opposition to the signal-strength scan is industry-wide. For example, Ameritech states that the Commission’s proposal would require cellular carriers to scan all the cellular frequencies and the A through E blocks of the PCS frequencies, increasing call-connect time considerably.<sup>16</sup> AT&T Wireless states that the idea is “misguided” and that the strongest signal may not be the best signal.<sup>17</sup>

Yet, Ad Hoc includes a paper from a consultant, the “Trott Communications Group,” stating that selecting the strongest signal “is easily achievable and will impose a minimum burden on manufacturers compared to the benefits provided to the user.”<sup>18</sup> SBMS would ask the FCC to rely upon the statements of the manufacturers themselves and not those of a consultant. Wireless manufacturers comment that the capability of a common interface standard is far from being

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<sup>14</sup>Ad Hoc Alliance p. 6.

<sup>15</sup>*Ibid.* Attachment E.

<sup>16</sup>Ameritech p. 8.

<sup>17</sup>AT&T Wireless p. 5.

<sup>18</sup>Ad Hoc Alliance, Attachment A.

realized.<sup>19</sup> In fact, manufacturers state that “without a common air interface, the goal of allowing mobile customers access to a variety of systems, even for 911 purposes, is unrealistic.”<sup>20</sup>

The American Mobile Telecommunications Association (“AMTA”) also opposes the FCC’s multiple interface proposal saying, “it is technically impossible unless the FCC also elects to require a universal air interface, contrary to its express assertion in this Notice and to its commitment to reliance on marketplace forces.”<sup>21</sup> In addition, national public safety agencies see the multiple mobile system access proposal as unrealistic. APCO, NENA and NASNA state that “we do not currently advocate a multi-mode equipment requirement.”<sup>22</sup>

In short, the Commission should cease the consideration of this impractical, misguided, and technically flawed idea, as doing so is an unproductive expenditure of the time and energy of all those involved with wireless E911.

### **Reporting Requirements Should be Kept to a Minimum**

SBMS urges that at most an annual report from the wireless industry would be sufficient to brief the FCC on E911 status. The proposal from APCO, NENA and NASNA does not appear overly burdensome, provided the Commission keeps its requirements narrowly focused and directed

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<sup>19</sup>Nokia p. 6.

<sup>20</sup>E.F. Johnson p. 6.

<sup>21</sup>AMTA p. 6.

<sup>22</sup>APCO, NENA and NASNA p. 6.

to specific points.<sup>23</sup> However, SBMS would object to requirements which require research into areas outside of its normal business activities.

Also, several parties commented that developers of advanced location technology should have their equipment certified by a neutral testing laboratory.<sup>24</sup> SBMS supports this proposal as it will maintain consistency and objectivity concerning this controversial topic.

**Customer Education Should be Developed at the State and Local Levels Through Public Safety and Wireless Industry Joint Efforts**

As SBMS stated in its original comments, customer education is very important and its development should be a joint effort between the wireless and public safety industries.<sup>25</sup> Other wireless carriers and public safety agencies have agreed with SBMS that a joint effort is the best approach to wireless E911 customer education.<sup>26</sup> In addition, many parties state that a federal mandate would be ineffective due to the differing nature of 911 across the country.<sup>27</sup> For the FCC to issue anything besides the most general education guidelines would restrict carriers and public safety agencies from producing materials that truly educate customers on the specific 911 situations occurring in the differing markets across the country.

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<sup>23</sup>APCO, NENA and NASNA p. 5.

<sup>24</sup>Ibid; GTE p. 6.

<sup>25</sup>SBMS p. 7.

<sup>26</sup>Ameritech p. 16; AT&T Wireless p. 7; New Jersey OETS p. 4; Texas ACSEC p. 4.

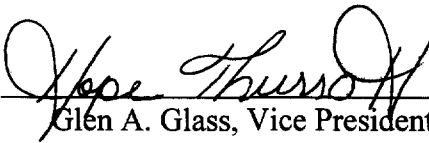
<sup>27</sup>360 Communications p. 8; Ameritech p. 16; Airtouch p. 7; BANM p. 6.

**Conclusion**

SBMS recommends the Commission act on the customer education portion of this FNPRM, withhold action on the remainder and, instead, continue to evaluate the progress of wireless E911 as the Phase II requirements are met by wireless providers.

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October 25, 1996

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